

3 The brake system of claim 2 wherein said pedal simulator further includes a housing defining a bore having

a hydraulic master cylinder connected in fluid communication with said vehicle brake via said third fluid conduit;

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an electrically-operated valve disposed in said third fluid conduit, said valve preventing the flow of hydraulic brake fluid between said master cylinder and said vehicle brake when closed, said valve being open to permit the flow of hydraulic brake fluid between said master cylinder and said vehicle brake when said valve is electrically deenergized;

a fourth fluid conduit connected in fluid communication with said master cylinder and said third fluid conduit;

a pedal simulator connected in fluid communication with said master cylinder via said fourth fluid conduit;

an second electrically-operated valve disposed in said fourth fluid conduit, said second valve being closed to prevent the flow of hydraulic brake fluid between said master cylinder and said pedal simulator when said second valve is deenergized, said second valve permitting the flow of hydraulic brake fluid between said master cylinder and said pedal simulator when said second valve is open; and

a damping circuit hydraulically interposed between said master cylinder and said pedal simulator, said damping circuit comprising, in parallel flow paths, an orifice and a check valve such that said damping circuit presents a first cross sectional flow area to fluid flowing from said

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master cylinder through said damping circuit into said pedal simulator, and presenting a second cross sectional flow area, different from said first cross sectional flow area, to fluid flowing from said pedal simulator to said master cylinder through said damping circuit.

20. The electro-hydraulic brake system of claim 19 further including a third electrically-operated valve disposed in said first fluid conduit, said third valve preventing fluid communication between said pump and said fluid separator unit when said third valve is closed, said third valve permitting fluid communication between said pump and said fluid separator unit when said third valve is open, the electro-hydraulic brake system further including fifth fluid conduit having a first end connected in fluid communication with said first fluid conduit and said fluid separator unit and having a second connected in fluid communication with said reservoir, the electro-hydraulic brake system further including a fourth electrically-operated valve disposed in said fifth fluid conduit, said fourth valve preventing fluid communication between said fluid separator unit and said reservoir when said fourth valve is closed, said fourth valve permitting fluid communication between said fluid separator unit and said reservoir when said fourth valve is open.

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